

IN THE CLAIMS

1. (Currently Amended) In a beginning tunneling device, a method of communication comprising the steps of:
 - detecting an initial request at the beginning tunneling device;
 - identifying the initial request as a candidate to be converted to a tunneling request;
 - modifying at least one indicator of an initial header in the initial request to convert the initial request into the tunneling request; and
 - forwarding the tunneling request towards an end tunneling device.
2. (Currently Amended) The method of claim 1 wherein the step of identifying further comprises the step at least one of:
 - detecting that a destination address in the initial request is for a destination device associated with an end tunneling device, identifying any initial request received that has a particular source address as being designated to become a tunneling request, and interpreting information from an initial header in order to identify that the initial request is intended to be a tunneling request.
3. (Original) The method of claim 1 wherein the step of modifying comprises the step of:
 - setting a protocol indicator in the initial header to a value indicating that the initial request is a tunneling request.
4. (Original) The method of claim 1 wherein the step of modifying comprises the step of:
 - replacing a destination address of a destination device in the initial header with an end tunneling address of an end tunneling device to produce a tunneling header.

5. (Original) The method of claim 1 wherein the step of modifying comprises the step of:
 - specifying a destination code within the tunneling header for at least one of a plurality of destination addresses of destination devices served by the end tunneling device.
6. (Original) The method of claim 5 wherein the initial request received by the beginning tunneling device is in the format of a TCP/IP protocol and wherein the step of specifying comprises the steps of:
 - generating a destination code to designate a destination address served by the end tunneling device; and
 - storing the destination code in a fragment offset field of an IP header of the tunneling request.
7. (Original) The method of claim 1 wherein the step of modifying comprises the step of:
 - setting an error correction code in the tunneling header to reflect modifications made to convert the initial header to the tunneling header.
8. (Original) The method of claim 1 wherein the initial request received by the beginning tunneling device is in the format of a TCP/IP protocol and wherein the step of modifying comprises the step of:
 - setting a protocol indicator in the initial header to a value indicating that the initial request is a tunneling request;
 - replacing a destination address in the initial header with an address of an end tunneling device; and
 - setting an error correction code in the tunneling header to reflect modifications made to the initial header.

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9. (Original) The method of claim 1 wherein the initial request and the tunneling request are the same size.
10. (Currently Amended) The method of claim 9 wherein the initial request and the tunneling request include respective initial headers and tunneling headers of the same size.
11. (Original) The method of claim 1 wherein the initial request is a full initial request and wherein the full initial request can be fully converted into a single tunneling request.
12. (Currently Amended) In an end tunneling device, a method of communication comprising the steps of:
 - detecting a tunneling request;
 - identifying the tunneling request as a candidate to be converted to an initial request;
 - modifying the at least one indicator of a tunneling header in the tunneling request to convert the tunneling request into the initial request;
 - and
 - forwarding the initial request towards a destination device.
13. (Original) The method of claim 12 wherein the step of modifying comprises the step of:
 - setting a protocol indicator obtained from the tunneling header to a value to convert the tunneling request to an initial request.
14. (Original) The method of claim 12 wherein the step of modifying comprises the step of:

replacing an end tunneling address of the end tunneling device in the tunneling header with a destination address to produce an initial header.

15. (Original) The method of claim 12 wherein the step of modifying comprises the step of:

obtaining a destination code within the tunneling header for at least one of a plurality of destination addresses of destination devices served by the end tunneling device; and wherein the destination address used in the step of replacing is determined by the destination code.

16. (Original) The method of claim 15 wherein the tunneling request received by the end tunneling device is in the format of a TCP/IP protocol and wherein the step of obtaining comprises the steps of:

reading a destination code from a fragment offset field of an IP header of the tunneling request; and

from the destination code, ascertaining the destination address served by the end tunneling device.

17. (Original) The method of claim 12 wherein the step of modifying comprises the step of:

setting an error correction code in the initial header to reflect modifications made to convert the tunneling header to the initial header.

18. (Original) The method of claim 12 wherein the tunneling request received by the end tunneling device is in the format of a TCP/IP protocol and wherein the step of modifying comprises the steps of:

setting a protocol indicator obtained from the tunneling header to a value to convert the tunneling request to an initial request;

replacing an address of the end tunneling device in the tunneling header with destination address to produce an initial header; and
setting an error correction code in an initial header to reflect modifications made to the tunneling header.

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21. (Currently Amended) A beginning tunneling device for processing initial requests comprising:

a memory;

a communications interface;

a processor; and

an interconnection mechanism coupling the memory, the processor and the communications interface;

wherein the processor is configured to:

detect an initial request at the beginning tunneling device;

identify the initial request as a candidate to be converted to a tunneling request;

modify at least one indicator of an initial header in the initial request to convert the initial request into the tunneling request; and

forward the tunneling request towards an end tunneling.

22. (Currently Amended) The beginning tunneling device of 21 wherein, to identify the initial request, the beginning tunneling device is configured to perform at least one of the group comprising detect that a destination address in the initial request is for a destination device associated with an end tunneling device, identify any initial request received that has a

particular source address as being designated to become a tunneling request, and interpret information from an initial header in order to identify that the initial request is intended to be a tunneling request.

23. (Original) The beginning tunneling device of claim 21 wherein, to modify at least one indicator, the beginning tunneling device is configured to:
set a protocol indicator in the initial header to a value indicating that the initial request is a tunneling request.
24. (Original) The beginning tunneling device of claim 21 wherein, to modify at least one indicator, the beginning tunneling device is configured to:
replace a destination address of a destination device in the initial header with an end tunneling address of an end tunneling device to produce a tunneling header.
25. (Original) The beginning tunneling device of claim 21 wherein, to modify at least one indicator, the beginning tunneling device is configured to:
specify a destination code within the tunneling header for at least one of a plurality of destination addresses of destination devices served by the end tunneling device.
26. (Original) The beginning tunneling device of claim 25 wherein the initial request received by the beginning tunneling device is in the format of a TCP/IP protocol and wherein, to specify a destination code, the end tunneling device is further configured to:
generate a destination code to designate a destination address served by the end tunneling device; and
store the destination code in a fragment offset field of an IP header of the tunneling request.

27. (Original) The beginning tunneling device of claim 21 wherein, to modify at least one indicator, the beginning tunneling device is configured to:
- set an error correction code in the tunneling header to reflect modifications made to convert to the tunneling header the initial header.
28. (Original) The beginning tunneling device of claim 21 wherein the initial request received by the beginning tunneling device is in the format of a TCP/IP protocol and wherein, to modify at least one indicator, the beginning tunneling device is configured to:
- set a protocol indicator in the initial header to a value indicating that the initial request is a tunneling request;
 - replace a destination address in the initial header with an address of an end tunneling device; and
 - set an error correction code in the tunneling header to reflect modifications made to the initial header.
29. (Original) The beginning tunneling device of claim 21 wherein the initial request and the tunneling request are the same size.
30. (Currently Amended) The beginning tunneling device of claim 29 wherein the initial request and the tunneling request include respective initial headers and tunneling headers of the same size.
31. (Original) The beginning tunneling device of claim 21 wherein the initial request is a full initial request and wherein the full initial request can be fully converted into a single tunneling request.
32. (Currently Amended) A end tunneling device for processing tunneling requests comprising:
- a memory;

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a communications interface;
a processor; and
an interconnection mechanism coupling the memory, the processor
and the communications interface;

wherein the processor is configured to:

detect a tunneling request;

identify the tunneling request as a candidate to be
converted to an initial request;

modify the at least one indicator of a tunneling header
in the tunneling request to convert the tunneling request into
the initial request; and

forward the initial request towards a destination
device.

33. (Original) The end tunneling device of claim 32 wherein, to modify the at least one indicator, the end tunneling device is configured to:
set a protocol indicator obtained from the tunneling header to a value to convert the tunneling request to an initial request.
34. (Original) The end tunneling device of claim 32 wherein, to modify the at least one indicator, the end tunneling device is configured to:
replace an end tunneling address of the end tunneling device in the tunneling header with a destination address to produce an initial header.
35. (Original) The end tunneling device of claim 32 wherein, to modify the at least one indicator, the end tunneling device, is configured to:
obtain a destination code within the tunneling header for at least one of a plurality of destination addresses of destination devices served by the end tunneling device; and wherein the destination address used in the step of replacing is determined by the destination code.

36. (Original) The end tunneling device of claim 35 wherein the tunneling request received by the end tunneling device is in the format of a TCP/IP protocol and wherein, to obtain a destination code, the end tunneling device, is configured to:
- read a destination code from a fragment offset field of an IP header of the tunneling request; and
 - from the destination code, ascertain the destination address served by the end tunneling device.
37. (Original) The end tunneling device of claim 32 wherein, to modify the at least one indicator, the end tunneling device is configured to:
- set an error correction code in the initial header to reflect modifications made to convert the tunneling header to the initial header.
38. (Original) The end tunneling device of claim 32 wherein the tunneling request received by the end tunneling device is in the format of a TCP/IP protocol and wherein, to modify the at least one indicator, the end tunneling device is configured to:
- set a protocol indicator obtained from the tunneling header to a value to convert the tunneling request to an initial request;
 - replace an address of the end tunneling device in the tunneling header with destination address to produce an initial header; and
 - set an error correction code in an initial header to reflect modifications made to the tunneling header.
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41. (Currently Amended) A computer program product that includes a computer readable medium having instructions stored thereon for

conducting communications such that the instructions, when carried out by the computer, cause the computer to perform the steps of:

- detecting an initial request;
- identifying the initial request as a candidate to be converted to a tunneling request;
- modifying at least one indicator of an initial header in the initial request to convert the initial request into the tunneling request; and
- forwarding the tunneling request towards an end tunneling device.

42. (Currently Amended) A beginning tunneling device, for processing initial requests comprising:

- a memory;
- a communications interface;
- a processor;
- an interconnection mechanism coupling the memory, the processor and the communications interface;
- means, coupled to the communications interface, for detecting an initial request;
- means, coupled to the communications interface, for identifying the initial request as a candidate to be converted to a tunneling request;
- means, coupled to the communications interface, for modifying at least one indicator of an initial header in the initial request to convert the initial request in to the tunneling request; and
- means coupled to the communications interface, for forwarding the tunneling request towards an end tunneling device.